

## Special Issue

# Sustainable Mining: Advancements, Challenges and Future Directions

### Message from the Guest Editors

Sustainable mining practices are the future of the extractive industry. The challenges are technical and extra-technical. The large-scale mines of the future will always deal with lower mineral grades and deeper deposits, facing issues with technical viability and the safety and well-being of the operators. The deep deposits will provide stronger rocks, which will increase the energy demand for the comminution processes: the sources for this energy will have to shift to clean and renewable. On the other hand, the new deposits available are rich in grade, close to the surface and are of a small scale. The artisanal and small-scale mining will take a larger and larger role in the mineral value chain, facing the environmental and social issues that this size of mining carries. The value chain will shift from a linear to a circular economy, which will include the objective of zero-waste mining. This Special Issue focuses on the advancements, challenges, and future directions of sustainable mining. We invite original research articles, reviews, and other related contributions to this Special Issue.

### Guest Editors

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### Deadline for manuscript submissions

closed (1 November 2025)



## Minerals

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Impact Factor 2.2  
CiteScore 4.4



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## About the Journal

### Message from the Editor-in-Chief

*Minerals* welcomes submissions that report basic and applied research in mineralogy. Research areas of traditional interest are mineral deposits, mining, mineral processing and environmental mineralogy. The journal footprint also includes novel uses of elemental and isotopic analyses of minerals for petrology, geochronology and thermochronology, thermobarometry, ore genesis and sedimentary provenance. Contributions are encouraged in emerging research areas such as applications of quantitative mineralogy to the oil and gas, manufacturing, forensic science, climate change, geohazard and health sectors.

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### Editor-in-Chief

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